

Abstract of the Disclosure

A method of heating molten aluminum flowing in a heated trough member comprising the steps of providing a source of molten aluminum and providing a trough member comprised of a first side and a second side, the first and the second sides having outside surfaces, the sides formed from a ceramic material resistant to attack by molten aluminum. The first side and second side have heating element receptacles provided therein with protection tubes provided in the receptacles. The protection tubes are comprised of a refractory selected from the group consisting of mullite, boron nitride, silicon nitride, silicon carbide, graphite, silicon aluminum oxynitride or a metal selected from Kovar[®] and titanium. Electric heating elements are positioned in the tubes. Molten aluminum is flowed along the trough member from the source and electric power is passed to the heating elements to heat the molten aluminum as it flows along the trough member.